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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,269	04/22/2004	Richard B. Evans	05165.1520	6459

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EXAMINER
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BREAN, LAURA MICHELLE

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/829,269

Applicant(s)

EVANS, RICHARD B.

Examiner

Laura M. Brean

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 21-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/22/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/26/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I (claims 1-20) in the reply filed on 11/30/2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 21-24 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/30/2005.

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

4. The disclosure is objected to because of the following informalities:

On page 4, under the "Brief Description of Drawings", Fig.7 is directed to an embodiment of the invention illustrated in "Fig. 5" and should be changed to --Fig. 3--.

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5. The use of the trademarks MICARATA, DELRIN, and VYON has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

### ***Claim Objections***

6. Claim 9 is objected to because of the following informalities:

Claim 9 cites in lines 1-2 that "the insert comprises nylon and Delrin®" and should be changed to --the insert comprises nylon or Delrin®--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 9 contains the trademark/trade name DELRIN®. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe an ultra high molecular weight polymer and, accordingly, the identification/description is indefinite.

***Claim Rejections - 35 USC § 102 & 35 USC § 103***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 10-11 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Carlson et al. (U.S. Publication 2004/0079208), herein referred to as Carlson.

Carlson discloses an anvil (base plate, 26) capable of providing support to a backed ply material cut by an ultrasonic blade (30), the backed ply material traveling in a first direction (along the longitudinal length of the base, 26), the ultrasonic blade having a tip, the ultrasonic blade being operable to travel along a path (122), and the path being oriented in a transverse manner relative to the first direction (page 5, paragraph 42).

Carlson discloses the anvil comprising a rigid base (26) for securing the anvil to a cutting assembly, a surface coinciding with the path (the grooved portion of the base plate's back rail, 40), the surface being secured to the base (page 3, paragraph 24), and a groove disposed upon the surface (the grooved portion of the base plate's back rail, 40), the groove being in cooperative alignment with the tip (shown in Figure 1).

In regards to claim 10, Carlson discloses a system comprising an ultrasonic cutting tool (16) comprising a stylus (cutting blade, 30), the stylus comprising a tip (shown in Figure 1) and an anvil (base, 26) comprising a first surface (40) capable of supporting a backed material at a first height, a second surface (40) capable of supporting a backed material at a second height, and the third surface (40) in cooperative alignment with the tip, the third surface being disposed between the first surface and the second surface, wherein the third surface is capable of providing support for the backing at a third height, the third height being relatively below the first

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height and the second height. The three surfaces, as shown in Figure 1, are situated about the groove in back plate, 40. The first and second surfaces refer to the two flat areas just to the left and right of the groove, positioned beneath the blade. The third surface refers to the concave groove surface disposed between the two flat areas.

In regards to claim 11, Carlson discloses the third surface (40) is a groove (as previously identified), the groove being disposed along a path (122) traveled by the tip.

In regards to claim 20, Carlson discloses that the first height (40) and the second height (40) are essentially the same (as shown in Figure 1).

12. Claims 2-4 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson and in view of Loose (U.S. Patent 3,683,736). Carlson discloses the claimed invention, but is silent as to the material of the base, 26. However, attention is directed to the Loose device that also discloses an anvil (11) utilized for ultrasonic perforation of film and paper material. Loose discloses (column 2, lines) that the anvil is made of a dense rigid material, such as steel or other metal to support photographic paper or film. It would have been obvious to form the anvil of metal as taught by Loose to ensure that the anvil is not damaged by the cutting action as taught by Loose.

In regards to claim 4, since the back rail, like the anvil, is also capable of supporting the backed ply material, for the previously expressed reason of ensuring that the back rail is not damaged by the cutting action, it also would have been obvious to one having ordinary skill in the art at the time of the invention to have made the back rail and consequently the grooved surface of the back rail, out of steel or other metal as taught by the teachings of Loose.

In regards to claim 16, Carlson as modified by Loose discloses that the metal anvil is a dimensionally stable, rigid, and wears resistant material.

13. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson and in view of Loose (U.S. Patent 3,683,736), and in further view of Freed et al. (U.S. Patent 6,048,353). Herein Freed et al. shall be referred to as Freed. Carlson, as previously modified by Freed, does not disclose that the third surface includes a resilient material that deflects to the third height in response to force exerted by the tip. However, attention is directed to the Freed device that discloses an anvil, a cutting surface, to support a material, such as skin, that is composed of a polymeric material, i.e. polypropylene, that permits deformation so as to be capable of withstanding scoring by a surgical cutting edge. As previously discussed, the back plate and thus the insert are also cutting surfaces capable of providing support to the material that is being cut by a cutting edge. It would have been obvious to provide a layer of polymeric material over the back plate and thus the grooved insert to provide protection of the area against scoring from the cutting edge of the blade as taught by Freed.

14. Claims 5 and 12 rejected under 35 U.S.C. 102(e) as anticipated by Carlson or, in the alternative, under 35 U.S.C. 103(a) as obvious over Weeks et al. (U.S. Patent 6,720,058), herein referred to as Weeks. Although it appears that the groove is a an insert situated between clamps 42 and 44 as viewed from Figure 1, Carlson does not positively identify the groove as a separate piece from the back rail. However, attention

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is directed to the Weeks device that does disclose a groove situated under an ultrasonic tool, a horn, where its recognized that replaceable inserts can be used for the groove portion directly under the horn so that worn groove areas can be simply replaced without replacing the entire mandrel (base). It would have been obvious to one having ordinary skill in the art at the time of invention to have constructed the grooved section of back plate, 40, of Carlson between clamps 42 and 44, to be an insert (if not already), in view of the teachings of Weeks to be a separable and replaceable entity thereby inducing a cost and time savings if the part required replacement.

15. Claims 6 and 18 is rejected under 35 U.S.C. 102(e) as anticipated by Carlson or, in the alternative, under 35 U.S.C. 103(a) as obvious over Weeks and in further view of Thrasher (U.S. Patent 3,645,304,). Carlson, as previously modified by Weeks, discloses the claimed invention, except that the insert comprises a high pressure laminate. However, attention is directed to the Thrasher device that discloses an apparatus for operating a rotary saw that utilizes a wear plate formed from MICARTA®, a high pressure laminate. The wear plate is maintained in contact with the side surface of a saw blade under a resilient preload force. Thrasher discloses that it is old and well known in the art to form structures out of MICARTA® for applications requiring a wear resistant material with a slidable surface. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have formed the anvil of Carlson out of MICARTA® for the same purpose of forming the surface out of a wear resistant material that allows slidable movement of the cutting material. As previously

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discussed, the back plate and thus the insert are also cutting surfaces capable of providing support to the material that is being cut by a cutting edge. Therefore, it also would have been obvious to form the back plate and thus the grooved insert from MICARTA® for the same purpose of forming the surface out of a wear resistant material that allows slidable movement of the cutting material as taught by Thrasher.

16. Claims 7-9, 13-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson and in view of Weeks, and in further view of Greve et al. (U.S. Patent 5,072,640). Herein Greve et al. shall be referred to as Greve.

Carlson, as previously modified by Weeks, does not disclose that the insert comprises nylon or DELRIN® (ultra high molecular weight polymers). However, attention is directed to the Greve device that discloses a cylindrical shaped anvil located substantially across the length of the conveyor belt module being cut such that it provides support to the modules along a line directly opposite the length of the blade as the blade cuts through the modules. Greve discloses that DELRIN® is a very suitable material for the anvil. DELRIN® yields slightly under pressure to provide some stress relief to the anvil by absorbing the impact energy from the cutter, thereby prolonging the life of the cutting surface. It would have been obvious to form the anvil of Carlson from DELRIN® to provide protection of the cutting surface and prolong its usable life as taught by Greve. As previously discussed, the back plate and thus the insert are also cutting surfaces capable of providing support to the material that is being cut by a cutting edge. Therefore, it also would have been obvious to form the back plate and

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thus the grooved insert from DELRIN® to provide protection of the cutting surface and prolong its usable life as taught by Greve.

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,480,508 to Manabe et al discloses a ultrasonic cutter and anvil for cutting prepreg tape- backing paper. U.S. Patent 5,368,464 to Stewart et al. discloses a means for using an ultrasonic horn to cut small pieces of fabric on an anvil. U.S. Patent 5,265,508 to Bell et al., U.S. Patent 6,637,490 to Azulay, U.S. Publication 2005/0081692 to Mosiewicz et al. and U.S. Patent 6,749,102 to Yamano et al, disclose an ultrasonic slitter with a grooved anvil. U.S. Patent 5,944,924 to Engle et al. discloses a ultrasonic cutting apparatus and grooved cutter. U.S. Patent 3,768,619 to Lewis discloses the use of DELRIN® to provide stress relief to a surface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Brean whose telephone number is (571) 272-8339. The examiner can normally be reached on Monday through Friday, 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on (571) 272-4514. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMB  
02/03/2006



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